**Notes Questions for the Unit 13, Part 2 Notes: Timing and Coordination - KEY**

AP Biology, Written by Ms. Glick

**Vocabulary:** The following terms have been chosen for you from the Part 1 Notes. Define each term in the set and identify a connection between the two terms in the set.

1. Terms: phototropism and Photoperiodism

Definitions and Connection:

Phototropism: when plants grow in the direction of light

Photoperiodism: when plants flower in response to day/night lengths

Connection: both of these physiological events involve responses of plants to environmental stimuli

2.Terms: proximate cause and ultimate cause

Definitions and Connection:

Proximate Cause: the specific environmental stimulus that triggers a behavior and any physiological changes that are required to perform the behavior

Ultimate Cause: the evolutionary reason for the behavior… in other words, why is this behavior adaptive in this environment?

Connection: both these factors interact to result in a particular behavior

3.Terms: Innate behaviors and Learned behaviors

Definitions and Connection:

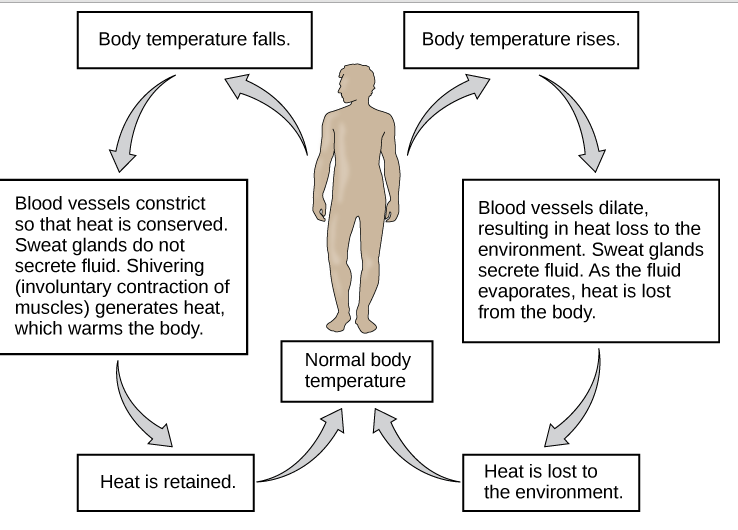
Innate Behaviors: inherited behaviors (i.e. instincts)

Learned Behaviors: behaviors that are not inherited and are based on learning from specific experiences

Connection: both types of behaviors typically involve a response to an environmental trigger

1. The respiratory system and circulatory system work together to deliver oxygen to the tissues of the body and remove carbon dioxide from the tissues of the body. Gas exchange between the lungs and the blood vessels occurs at the alveoli, small sacs within the lungs that are covered in a network of capillaries (small blood vessels). Explain how an increase in surface area of the alveoli would affect this system.

An increase in the surface area of the alveolar membrane would increase the rate of diffusion of oxygen out of the alveoli into the capillaries. It would also increase the rate of diffusion of carbon dioxide out of the capillaries into the alveoli.

1. Explain the role of auxin in phototropism.

Auxin is a hormone that causes elongation of cells on the dark side of a plant, making it bend towards light.

1. Using the diagram to the right, explain how the body responds to a decrease in body temperature.

Body temperature increases to return to normal by constricting blood vessels and inducing shivering.

1. What is a Fixed Action Pattern? Provide an example.

An FAP is a sequence of innate behaviors that always run to completion once triggered. An example of an FAP is the response of a male stickleback fish to the red belly of an intruder.